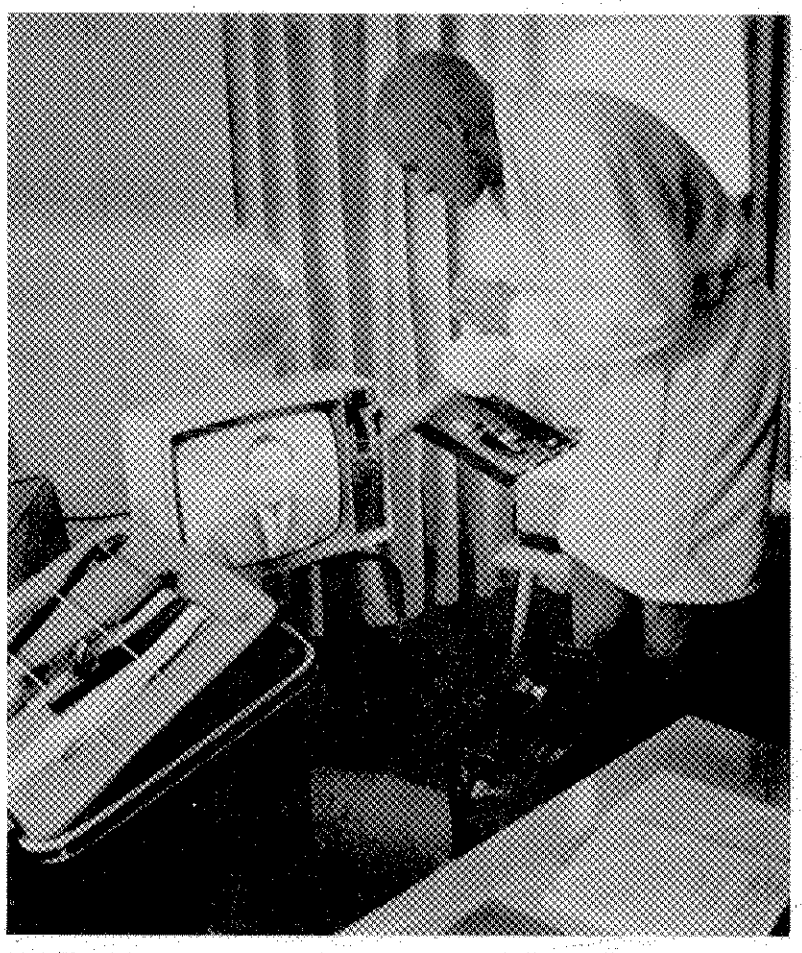
Space News

NASA ROUNDUP!

VOL. 1, NO. 9 MANNED SPACECRAFT CENTER, LANGLEY AFB, VA. February 21, 1962

John Glenn Orbits Earth Three Times

JOHN GLENN'S STAUNCHEST SUPPORTERS—daughter Lynn, wife Annie, and son David, have been 100 per cent behind him through all the delays and share his enthusiasm and confidence



WHILE NEWSMEN and hundreds of other people showed their consternation at the second weather postponement, Glenn took the news calmly, grabbed a cup of postum, and turned on the TV set in the crew quarters. He watched the remainder of the late show, then turned in for the night a second time.

Mercury Atlas 6 Flight Proves Man Is Able To Perform Tasks During Weightlessness

Astronaut John H. Glenn, Jr., yesterday became the first American to orbit the Earth. The spaceflight, often postponed because of weather and technical difficulties finally became a reality after a sudden change in weather and Glenn's name is certain to go down into history alongside the names of Astronaut Alan B. Shepard and Virgil I. "Gus" Grissom, who completed suborbital space flights last year. The flight started at 9:47 AM EST and was concluded at 2:43 PM EST when he splashed down in the Atlantic Ocean. The Friendship 7 with its now famous Astronaut pilot was picked up by the USS Noa at 3:01 PM and set on the Destroyer's deck at 3:04 PM. Glenn reported by radio to the Noa's crew, 'My condition is excellent.'

The near perfect weather and the outstanding performance of the spacecraft and launch vehicle systems seemed a fitting reward for the remarkable patience with which Glenn had shrugged off what seemed to be endless delays to others. Both Glenn and his back-up pilot, M. Scott Carpenter, have repeatedly stated that the delays would only serve to increase the sharpness of the crew and Glenn's performance during the flight seemed to give credence to this view.

The flight took an elapsed time of slightly more than four hours and 56 minutes, during which time John Glenn had travelled a total of more than 80,000 miles. Following his pickup by the Noa the side hatch of the Mercury spacecraft was blown and Glenn performed side egress.

Glenn was in voice contact with fellow astronauts at Mercury Tracking Stations during his history making flight, and in typical Glenn fashion many of the remarks were of a light nature.

In addition to reporting on his physical condition and the spacecraft's systems, he continually gave other impressions as to the view, etc. Shortly after lift-off Glenn said the "view is tremendous." When passing over the coastline of Australia on the first of his three trips around the earth, he was conversing with astronaut Gordon Cooper and he saw lights to the south. When Cooper informed him that they were the lights turned on as a salute by the citizens of Perth, he said, "the lights show very well and thank everybody for turning them on."

On his last orbit Gleen requested Cooper to send a message to the Commandant of Marines, General D. M. Shoup, notifying him that he had attained his necessary four hours of flight time and requesting flight pay.

After his re-entry, at which time the spacecraft attained a temperature of about 3,000 degrees and the cabin temperature was in excess of 130 degrees, when queried about his condition, Glenn said he felt fine and speaking of the experience of re-entry said "boy, that was a real fireball."

National radio and television coverage of the event started at 6:30 AM and lasted far past the time of recovery. The medias concerned not only covered the activities at Cape Canaveral but also those at the Glenn home in Arlington, Va., at the hometown of his parents, New Concord, Ohio, at the White House in Washington, and in the recovery area.

Following the completion of the flight and the recovery President Kennedy appeared on camera and spoke briefly concerning the success of the mission. He said in part, "I know I express the great happiness and thanksgiving of all of us on the completion of Colonel Glenn's trip. I also want to thank all of those who participated at Cape Canaveral who faced many disappointments and delays but kept their heads and made a judgement and today that judgement has been vindicated. Some time ago, I stated that all men sholud serve their country. Today Colonel Glenn served his country."

At New Concord, Ohio, many activities were held to mark the biggest day in the life of the town's hero. At T minus 15 minutes the sirens in town were sounded to give the citizens notice to gather at Muskingum College Auditorium to view the launch.

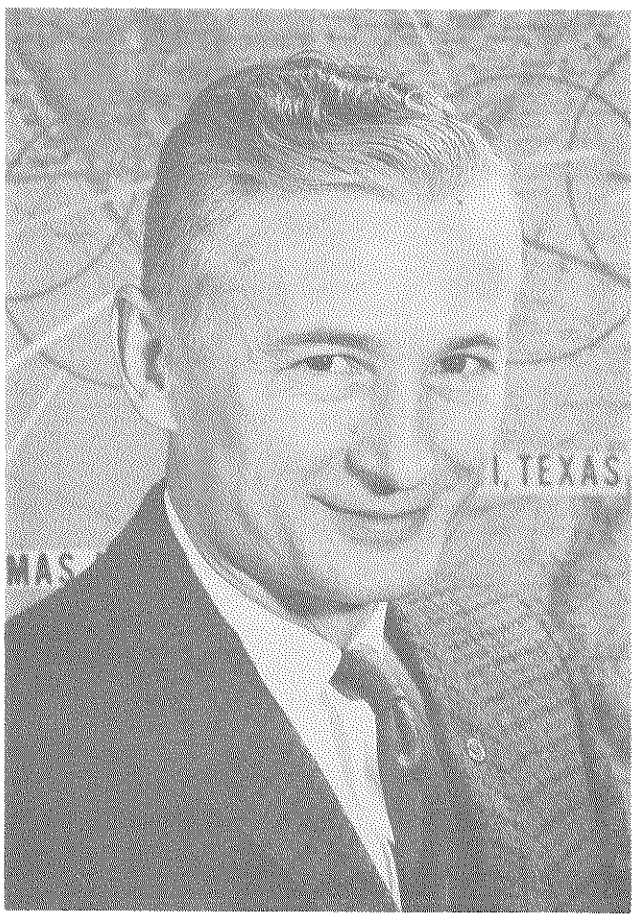
Following the flight, Glenn's mother said that most tense moment for her and Mr. Glenn were those moments just after the launch and before the successful orbit was announced. She said that in a telephone conversation on Tuesday night John had told her that he had "packed his bag for a little trip."

At Arlington, where media representatives stood by all day, Glenn's wife said that this was the "most wonderful day for my family. We're all so proud of everyone on the Mercury team who made it such a success."

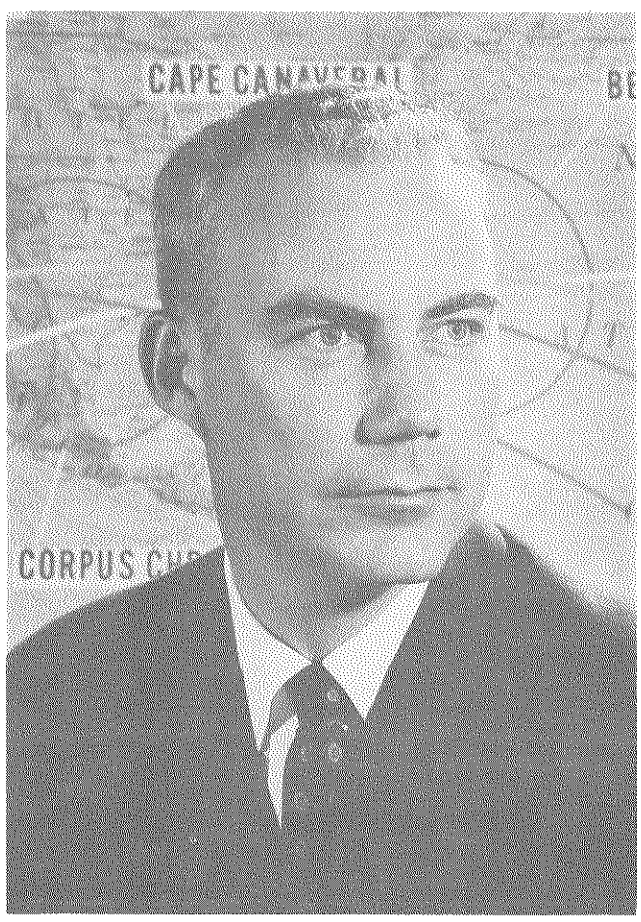
It was reported that one of the happiest men in the Mercury Control Center at the successful completion of the mission was Astronaut Donald K. "Deke" Slayton, who has been named to pilot the Mercury-Atlas 7 mission with Walter Schirra, Jr., as back-up pilot and Gus Grissom as technical adviser.

More than 500 media representatives followed the Mercury spacecraft at it circled the earth three times and kept the free world in constant contact with the progress of the mission. It was further reported that the Soviet Union factual reports were broadcast from time to time. One of the facilities at the Cape press site was a Voice of America van through which messages in many languages were transmitted to all parts of the world.

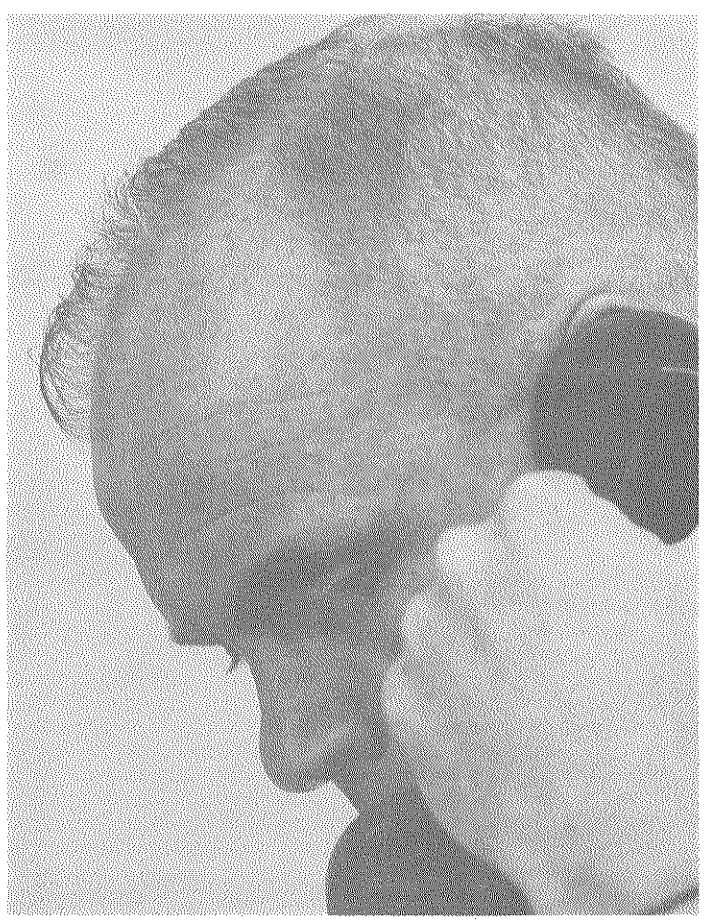
Glenn rose shortly after 2 AM, breakfasted with steak, scrambled eggs, toast, orange juice and coffee. Following his physical examination and the attachment of his bio-sensors, he was suited at 4:30 AM, the pressure check was completed at 4:38 AM, he left the crew quarters and was transferred to Complex 14 in the Transfer Van, arrived at the launch pad at 5:59 AM, and entered the spacecraft at 6:03 AM. At that point no one could know that he would spend nine hours and 21 minutes in that spacecraft before emerging on the deck of the Noa. During the trip he travelled around the earth at altitudes ranging from 100 to 160 statute miles.



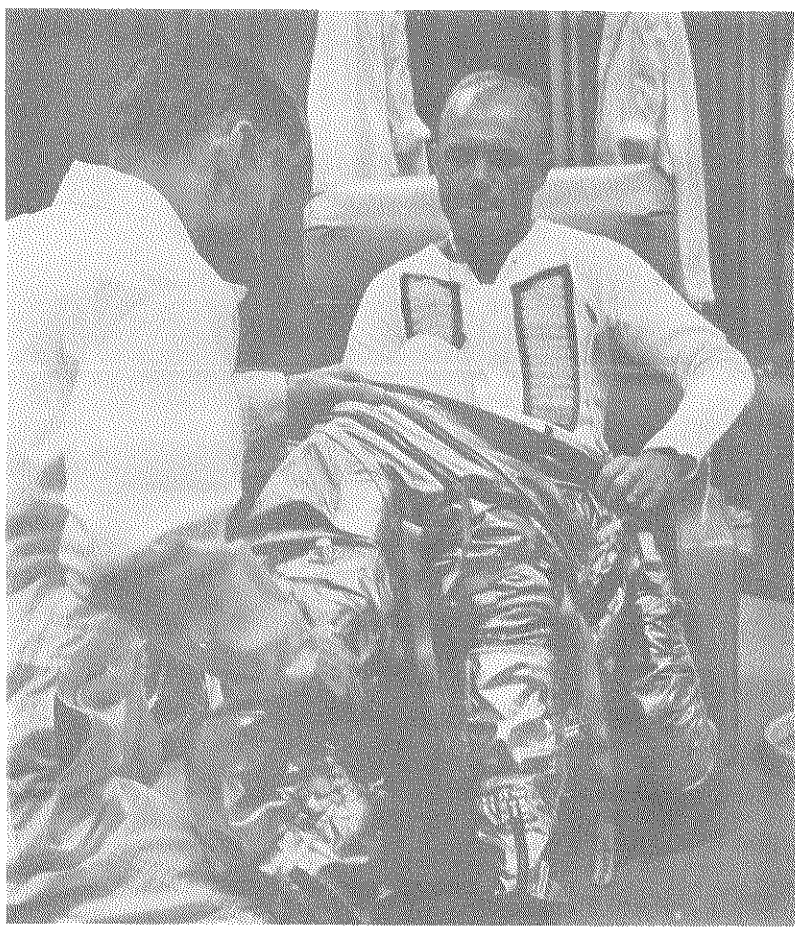
Equipment Specialist Joe W. Schmitt



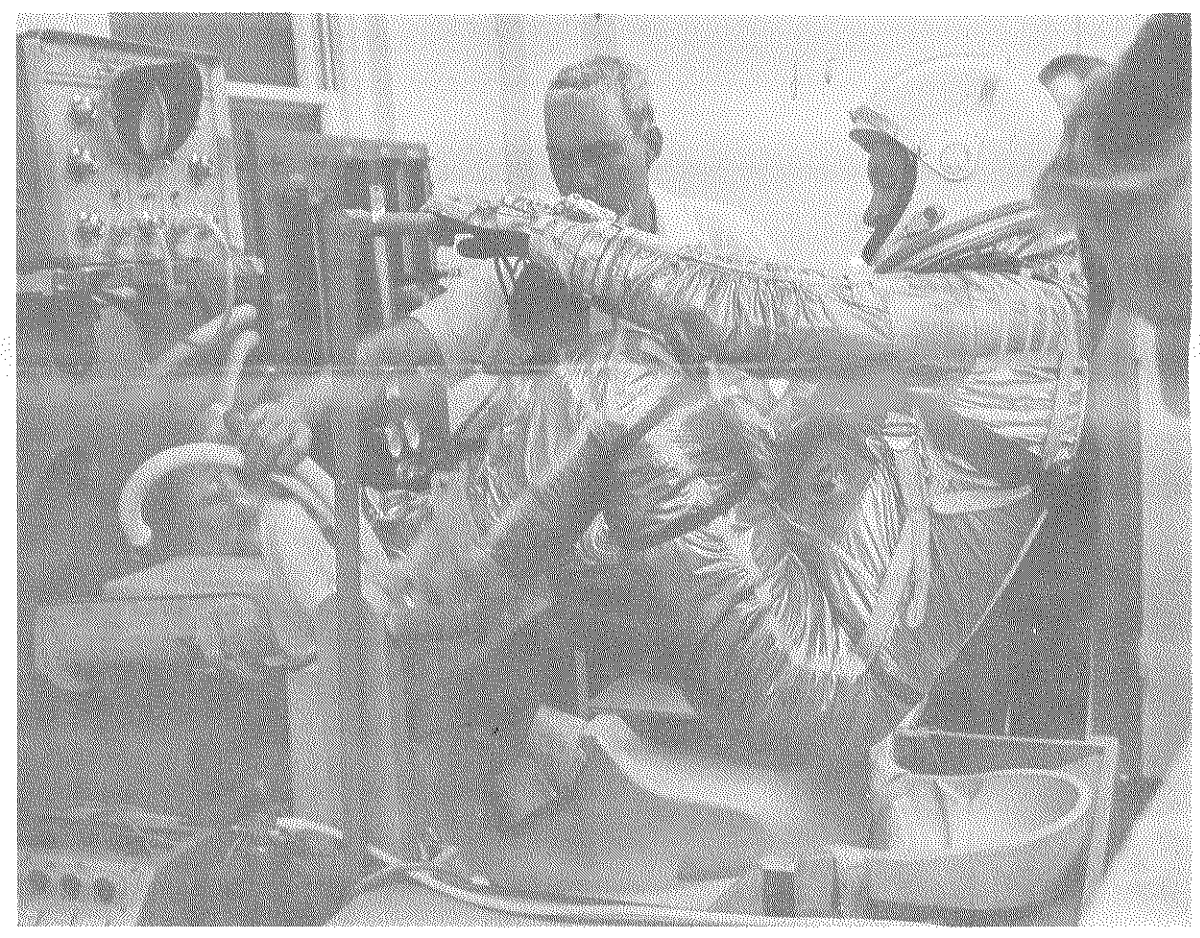
Astronaut Flight Surgeon Dr. William K. Douglas



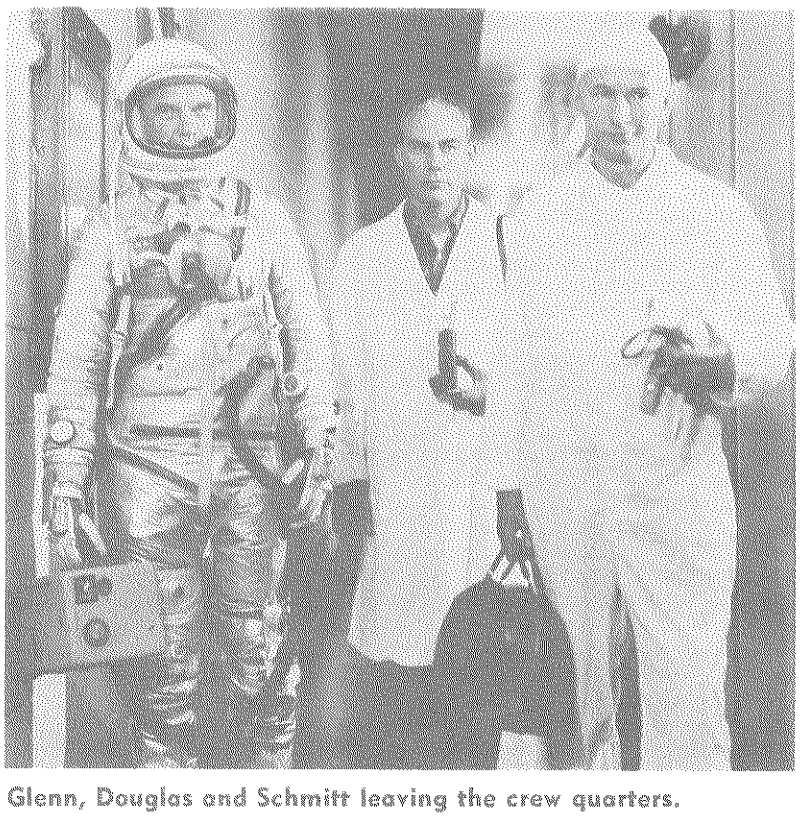
Astronaut John Glenn at familiar task



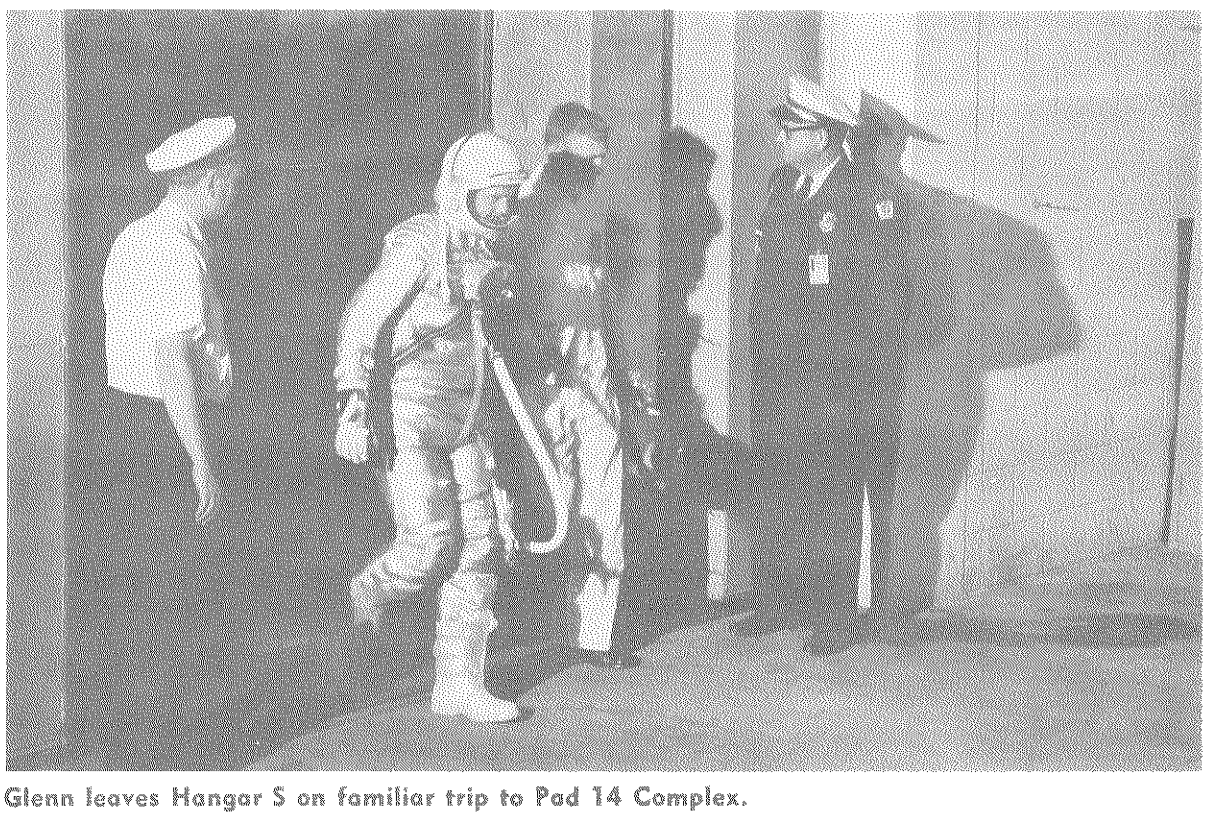
Schmitt assists Glenn in suiting up.



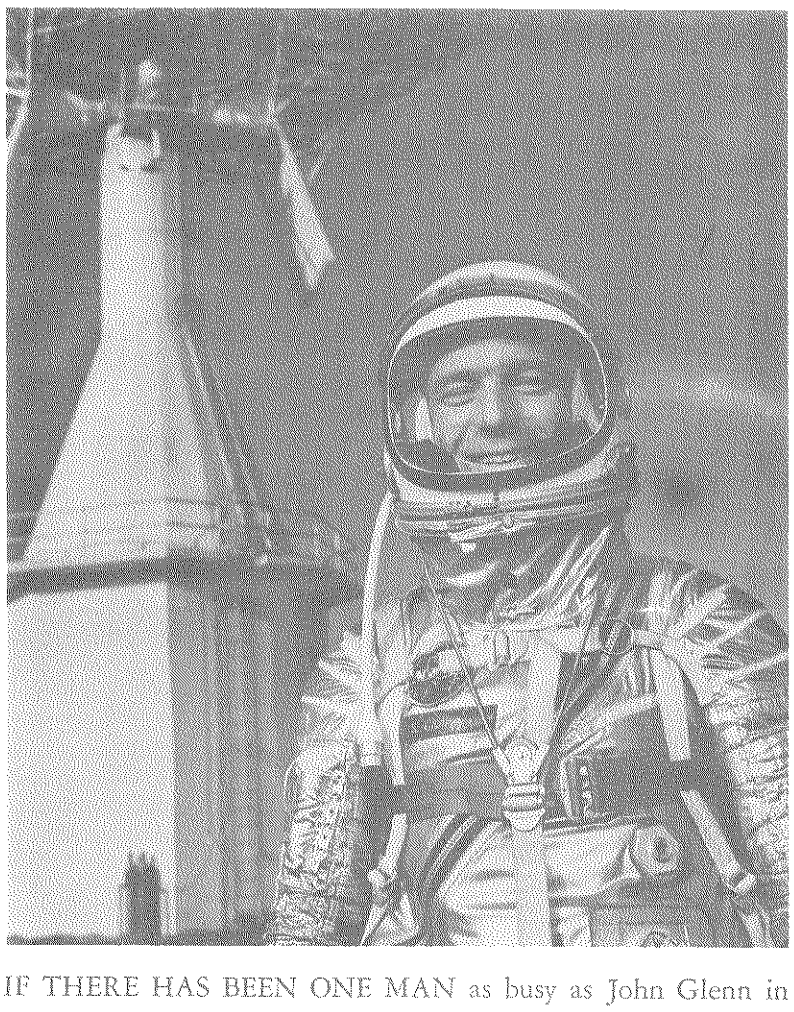
Douglas helps Glenn into suit pressure rig.

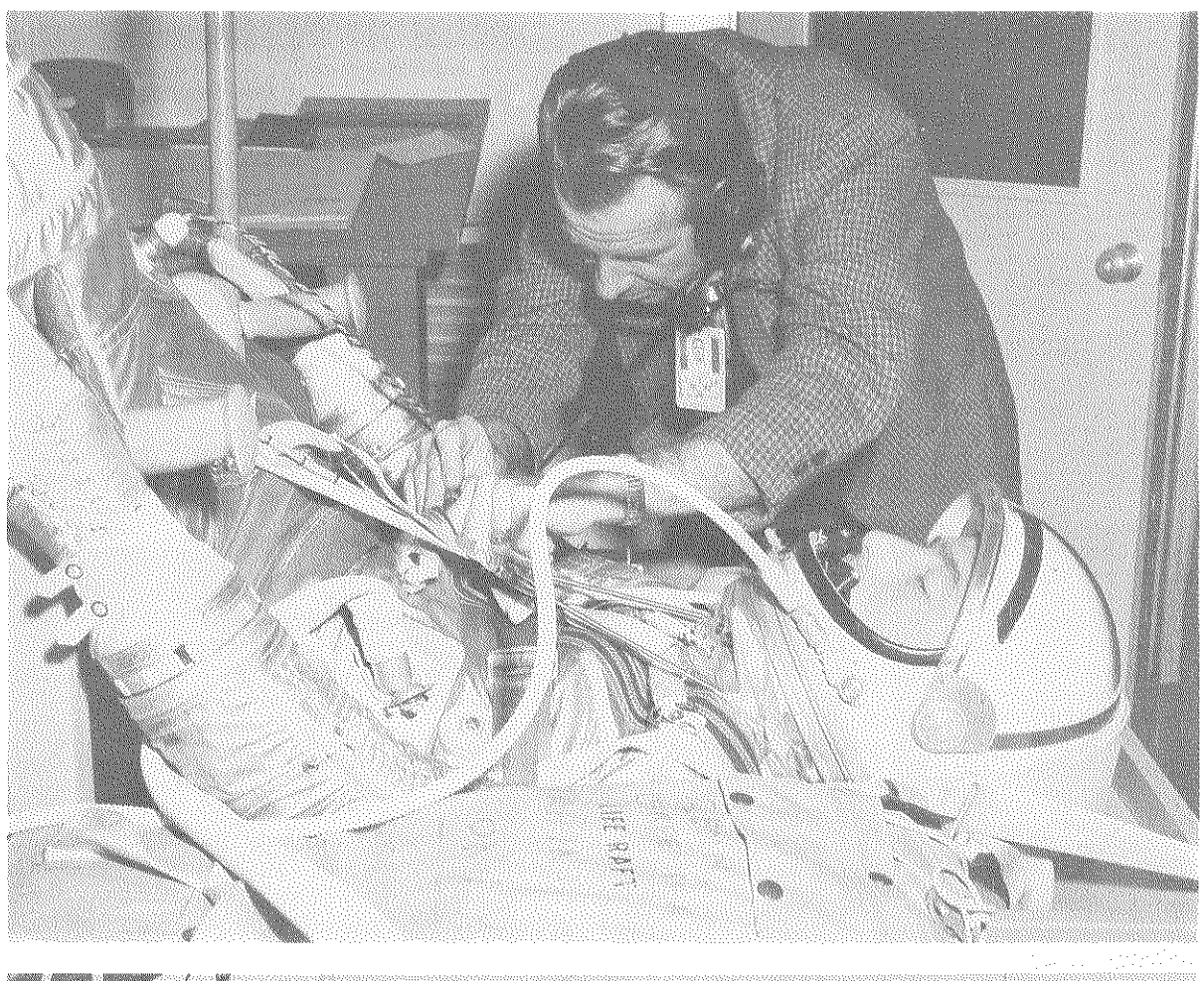


Glenn, Douglas and Schmitt leaving the crew quarters.



Glenn leaves Hangar S on familiar trip to Pad 14 Complex.





IF THERE HAS BEEN ONE MAN as busy as John Glenn in connection with preparation for the MA-6 flight that man is Astronaut M. Scott Carpenter, Glenn's back-up pilot. Since the team was named late in November, Carpenter has undergone all the tests along with Glenn, has served as his representative at meetings he could not attend, and has gone to the Pad 14 Complex during early phases of the split count-down for systems checks while Glenn was being prepared for the flight. He is shown above just after leaving the Mercury Control Center following a procedures test. At the upper right he is shown during a suit inflation test in the suit room of the crew quarters in Hangar S. At the right, he walks toward a personnel carrier during a land recovery drill. At lower left, he is shown assisting Glenn with equipment adjustments outside the blockhouse; and at the lower right, he is pictured after being suited up prior to one of the many tests he has run.

Environmental Control System To Be Used On MA-6 Decribed

The Mercury-Atlas 6 manned orbital spacecraft included the specially designed closed-type environmental control system to allow continuous flight monitoring of the spacecraft environment and to provide the astrounaut with a 100 per cent oxygen environment and pressurization for comfort and safety. This system was developed by the Air Research Manufacturing Division of Garrett Corporation under McDonnell Aircraft Corporation subcontract.

Requirements for development of the system were to (1) provide breathing oxygen for extended space flight, (2) provide adequate body ventilation, (3) remove metabolic products, (4) control cabin temperature within comfortable and safe limits during all flight phases, (5) provide cabin and suit pressuriation in various modes of operation, (6) operate under zero and high "G" acceleration, and (7) function automatically and manually.

Then environmental control system is located in the lower portion of the spacecraft under the astronaut's support counch. Through this system, both the cabin and the pilot's space suit are maintained at 5 psi in normal flight. The suit is provided for protection in event of cabin decompression; the pilot merely lowers the face plate of his helmet to close himself off from an undesirable cabin environment.

The system — two subsystems really — consists of cabin system and space suit system. Both systems operate simultaneously from oxygen, coolant water and electrical supplies. Oxygen is stored in two spherical bottles, positioned beneath the pilot's feet, while coolant water is contained in a tank with a pressurized bladder system for flow of water into the heat exchanger during weightless flight.

The pressure suit is a single-piece garment developed by the NASA, U.S. Navy, and the B. F. Goodrich Company. The helmet incorporates communication equipment and a crash protection liner.

Biosensor leads, used by Mercury medical doctors for monitoring the astronaut's physical status, are provided an outlet from the suit through a biosensor connector located above the right thigh.

A ventilation inlet port to provide air flow in the suit is located at the torso with an outlet port on the helmet. Oxygen entering the suit is forced through distribution ducts to body extremities and flows back over the body to lend cooling. The oxygen then passes into the helmet where a portion is used for breathing and the rest for carbon dioxide and water vapor removal.

The gaseous mixture removed from the suit and filtered of any particles of matter is then scrubbed of carbon dioxide in a chemical canister of activated charcoal and lithium hydroxide. Remaining gas is then cooled by a water exaporation-type heat exchanger using the natural vacuum of space to cause the coolant water to boil at approximately 35 degrees F.

Pressure in the space suit system is maintained by a regulator that meters oxygen into the system to maintain the suit at nominal cabin pressure. Thus, in normal operation the suit is not pressurized but provides necessary body ventilation.

A secondary oxygen bottle will automatically be activated if the primary supply should become depleted.

A cabin relief valve seals the cabin at 5.5 psi at 27,000 feet for cabin pressure and temperature control. A manual decompression feature is included in this valve for use by the pilot for emergency decompression in event of onboard fire or buildup of toxic gases.

Cabin temperature is maintained by a fan and heat exchanger of the same type as in the pressure suit system.

Post landing ventilation is provided by a snorkel valve system. At 20,000 feet during reentry from orbit, external air for ventilation is drawn by the suit compressor through the inlet valve.

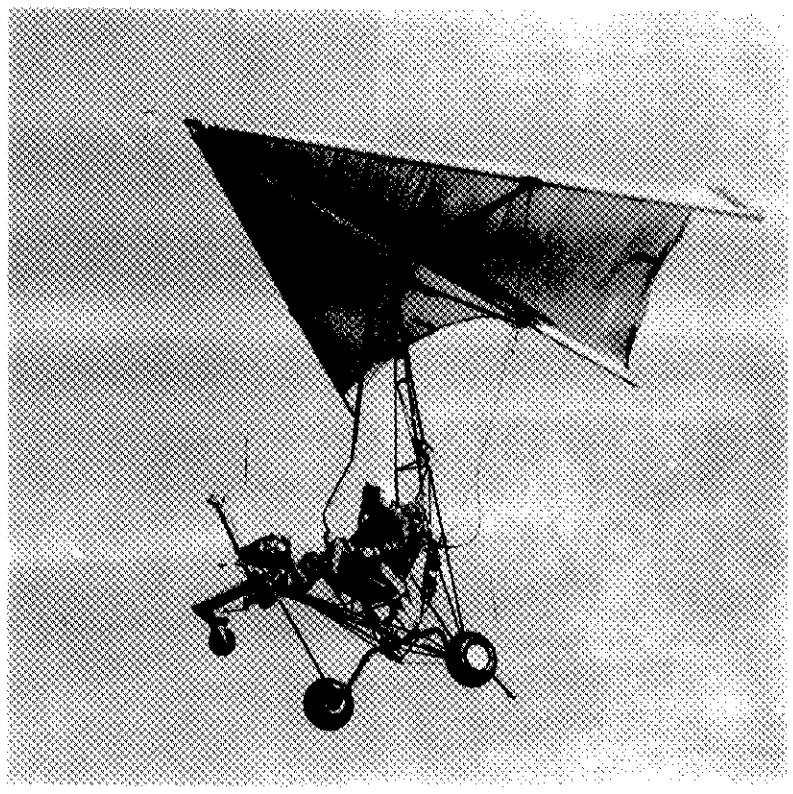
Just prior to launch, the astronaut's space suit is coupled to the environmental control system, the helmet visor is closed, and both the suit and cabin systems are purged to provide the 100 per cent oxygen environment. Ground cooling is provided by freon fed into heat exchangers through an umbilical connection.

Warning lights concerning this system are provided for loss of cabin pressure, depletion of primary oxygen supply, emergency rate mode of operation, and excessive cooling water to the suit and cabin heat exchangers.

The environmental control system will be monitored by systems personnel in the blockhouse near the launch pad throughout prelaunch and launch phases. After launch, the system will be monitored by environmental system monitors and Mercury medical monitors located in tracking stations throughout the world.

Monitoring procedures have been developed concurrent with normal operating ranges. Abnormal instrument readings have been defined with cross checks where possible to pinpoint system malfunctions.

As the spacecraft passes over a range station, the astronaut will give verbal reading of data as a check on telemetry and as a measurement of astronaut performance. Range stations, in return, will forward this information to Mercury Control Center at Cape Canaveral, where the environmental system monitor will be located beside the Chief Flight Surgeon for rapid exchange of information.



PARAGLIDER CONFIGURATION, called PARESEV (paraglider research vehicle), soars through air at NASA's Flight Research Center, Edwards, Calif., during preliminary flight tests. Milton O. Thompson, NASA aeronautical research pilot, has been assigned to fly the paraglider during preliminary studies.

Paraglider Research Vehicle Undergoing Test At Edwards AFB

Engineers at the National Aeronautics and Space Administration's Flight Research Center have started preliminary flight tests on a new device designed to safely return spacecraft and boosters to Earth. Called PARESEV (paraglider research vehicle), the paraglider was designed and constructed by engineers and technicians at NASA's Edwards facility.

The paraglider concept is currently under study by NASA scientists as a means of returning to Earth a two-man Mercury capsule, called Gemini, now under development. North American Aviation's Space and Information Systems Division, Downey, Calif., has been awarded a contract by NASA to develop the recovery system for the Gemini craft. The current Mercury capsule is recovered by a parachute.

Main feature of the strange-looking device is a parawing, controlled in the PARESEV by a pilot. By manipulating the wing, the pilot can fly the vehicle similar to a conventional glider. A similar system incorporated in the Gemini Mercury craft could be controlled from within by an astronaut, allowing considerable more flexibility in selecting landing sites.

Many parawing concepts have been studied during the past year. However, PARESEV is the first manned design capable of being towed and released for free flight. Engineers hope to study glide characteristics of the powerless configuration to determine if it is feasible for such projects as Gemini.

Additionally, scientists believe a similar design can be used to recover launch vehicles, such as the huge Saturn being developed by NASA, thus eliminating the loss of rockets that normally burn up in the atmosphere after boosting their payloads into orbit or on deep space probes.

The Flight Research Center experimentnal model incorporates a seat for the pilot, instrument panel for altitude and speed, a two-way radio, and a wing control system for pitch and roll. The tri-cycle landing gear employs hydraulic brakes and also can be controlled by the pilot.

The parawing is triangular-shaped and made of Irish Linen.

The vehicle is towed on the dry lake bed at Edwards by a truck, then released for free flight.

Three Firms to Submit Bids to NASA on RIFT

The National Aeronautics and Space Administration today selected three firms to submit final proposals on the design and development of a large nuclear rocket stage (RIFT) to flight test the NERVA nuclear rocket engine.

The firms are: General Dynamics/Astronautics, San Diego, California, Lockheed Missile and Space Company, Burbank, California and Martin Mariett Corporation, Baltimore, Maryland.

The RIFT (Reactor-In-Flight-Test) stage will be launched by an advanced Saturn booster in the 1966-67 period.

The contractor who will be selected for this program will be responsible for designing the RIFT stage, fabricating and assembling the stage at the Michoud Operations Plant, conducting components tests and full systems tests, and conducting certain tests and checkout items related to eventual flight testing. The initial work will emphasize research and development tasks required to answer critical technical problems. All of this work will emphasize safety and reliability of the system.

The NERVA (Nuclear Engine for Rocket Vehicle Application) engine is now under development for the National Aeronautics and Space Administration and the Atomic Energy Commission by industrial contractors. Aerojet-General Corporation is prime contractor for NERVA with Westinghouse as principal sub-contractor. All phases of NERVA development are managed by the joint NASA-AEC Space Nuclear Propulsion Office, Germantown, Maryland.

A two-day pre-proposal conference will be held at the NASA Marshall Space Flight Center, Huntsville, Alabama, in the near future to help brief these three firms. The companies will be given formal request for proposals and will have an opportunity to discuss the program with the Marshall Center's Project and Procurement Officials, who will direct the work.

Thirty-three firms attended the first phase pre-proposal conference at Marshall December 7. Five submitted initial bids January 3.

Houston Transfers

During the period January 30 through February 12 a total of 91 Manned Spacecraft Center personnel accomplished permanent change of station to Houston.

Spacecraft Research Division: Floyd V. Bennett, Thomas V. Chambers, Edward Chevers, Norma B. Fitzgerald, Lillian A. Greene, Joan G. Jones, Malcolm Jones, Lois A. Tilson, Lawrence G. Williams, Robert S. Harris, Alexandra M. Macpherson, Norman F. Smith.

Apollo Project Office: Marion R. Franklin, Allen L. Grandfield, Caldwell C. Johnson, Lee N. McMillion, Owen G. Morris, Carolyn L. Morrison, Robert A. Newlander, Robert O. Piland, Florence C. Ferrese, Robert P. Smith.

Technical Services: James E. Adkins, Jr., Robert M. Bernardin, James C. Brady, Paul O. Ferguson, Paul A. Folwell, Luther L. Hoover, Harry D. Stewart, John P. Voros, John L. Schulze, James J. Heffernan, Charles C. Nagle, Charles M. Tucker.

Life Systems Division: William M. Bush, Jr., Gilbert Freedman, William L. Gill, James P. Henry, Richard S. Johnston, Maxwell W. Lippitt, Jr., Gerard J. Pesman, Frank H. Simonski, Jr., James V. Correale.

Engineering Division: Robert Cohen, Donald Jacobs, James T. Rose, Joan P. Samonski.

Security Office: Lloyd O. Yorker.

Personnel Office: Janet S. Roth, Louise R. Morewitz.

Audit Office: Thomas J. Cassias.

Administrative Services Office: Cynthia L. McKinsey.

Digital Computer Group: John A. Roth.

Office of Chief Counsel: Porter H. Gilbert.

Transportation Office: Jacquilyne A. Bush.

Management Analysis Office: Charles F. Bingman, Cecil L. Roby, Dexter W. Haven.

Flight Operations Division: Robert P. Finley, Sigurd A. Sjoberg, Thomas A. Stuart.

Systems Evaluation & Development Division: Darlene K. Butler, William C. Chandler, Walter W. Guy, Richard B. Ferguson.

Office of Assistant Director for Research & Development: Maxime A. Faget, Johnn B. Lee, Julia R. Watkins, B. M. Wilson.

Procurement & Supply Office: Aaron B. Jordan, Harry L. Watkins, Wayne W. Corbett, Joe Harris, Marion C. Owens.

Financial Management Office: Robert B. Boyd, Judith C. Guy, Lynn C. McMillion, Woodrow W. Rasco.

Supply Office: Harold J. Ferrese.

Public Affairs Office: Alvin H. Morewitz.

Budget & Finance Office: Margaret R. Harrison, W. J. Little, Margaret M. Nagle.

Facilities, Design, Operations & Construction Office: James M. Bayne, I. W. Campagna, Raymond W. Helsem, John C. Welch.

Gemini Project Office: Margaret S. Marshall, Jean L. Petersen, Norman R. Schulze, Paul M. Sturtevant.

Space News NASA ROUNDUP!

SECOND FRONT PAGE

Mercury Recovery Force Is Deployed

For MA-6, a task force of twenty-four Navy ships and over sixty aircraft, with many supporting specialized units, was positioned from Cape Canaveral across the Atlantic to the Canary Islands. The organization responsible for support is known as the Project Mercury Recovery Force, under the command of Rear Admiral John L. Chew, USN, Commander Destroyer Flotilla FOUR.

MA-6 was the 20th recovery in which this force has participated. Composition of the forces varies with each recovery, but is normally composed of ships, aircraft and Marine helicopters from the U.S. Atlantic Flee, aircraft from the AFMTC, aircraft and pararescue teams of the Air Rescue Service and LARC's from the Army. Admiral Chew exercises overall control of the recovery force from the recovery room located next to the control room in the Mercury Control Center at Cape Canaveral.

The area off-shore to Bermuda was assigned to a recovery group under the command of Capt. C. H. Morrison, Jr., Commander Destroyer Squadron Twenty-Four, embarked in the USS Blandy. Units of this group are:

USS Blandy, USS Cone, USS Goodrich, USS C. S. Sperry, USS Observer, USS Exploit, USS Recovery, and four P2V Aircarft from Patrol Squadron Eighteen.

From Bermuda to approximately half way across the Atlantic, a group under the command of Rear Adm. W. E. Ellis, Commander Carrier Division Two who flew his flag in the USS Forrestal consists of:

USS Forrestal, USS Barry, USS Bearss, USS Stormes, USS Norflok, USS Glennon, USS Witex, four WV Aircraft from Airborne Early Warning Training Units Atlantic, four P5M Aircarft from Patrol Squadron Forty-Five, five P5M Aircraft from Patrol Squadron Forty-Nine, four SC-54 Aircraft from 55th Air Rescue Squadron, four P2V Aircraft from Patrol Squadron Eighteen, and 3 HUS helicopters from Marine Air Group Twenty-Six.

The area assigned the above group includes the site selected for the spacecraft landing if it was decided to terminate the flight after one orbit.

In the Eastern Atlantic Area, a group under the command of Capt. D. G. Dockum, USN, Commander Destroyer Development Group Two, embarked in the USS Hugh Purvis, was made up of:

USS Chuckawan, USS Hugh Purvis, USS Brownson, USS Sarsfield, four WV Aircraft from Airborne Warning Squadron Forty-Four, and four SA-16 or SC-54 Aircraft from the Air Rescue Service.

South of Bermuda at a site selected for landing at the end of the second orbit, under the command of Capt. J. H. Armstrong, was made up of:

USS Antietam, USS K. D. Bailey, USS Turner, three P5M Aircraft from Bermuda Patrol Unit, and three HUS helicopters from Marine Air Group Twenty-Six.

At the end of the third orbit, about 200 miles northwest of San Juan, a group under the command of RAdm E. R. Eastwold, Commander Carrier Division Sixteen, embarked in the the USS Randolph consisted of:

USS Randloph, USS Noa, USS Stribling, six P2V Aircarft from Patrol Squadron Sixteen, two SA-16 and two SC-54 Aircraft of the Air Rescue Service, and three HUS helicopters from Marine Air Group Twenty-Six.

The planned method of retrieval was by surface ship or helicopter. All of the deployed ships had conducted pick-up with dummy sapcecraft.

Appendectomy Is Performed On Ship

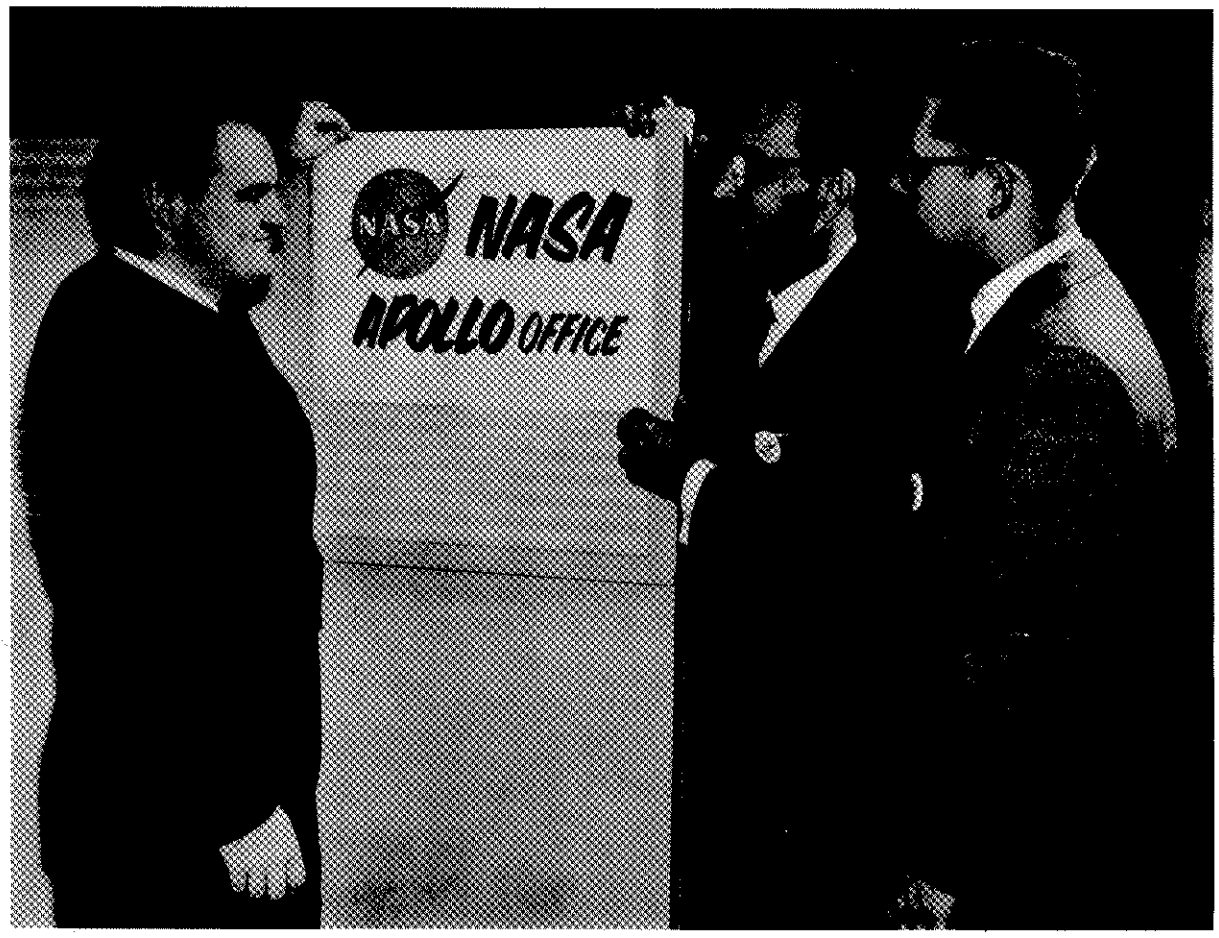
ABOARD USS ANTIETAM, Feb. 15 — Radioman Granerson Hester, 25, Pensacola, Fla., was recovering today from an emergency appendectomy performed shortly before midnight last night by a most unusual shipboard interservice medical team.

The 40-minute operation was conducted by Lt. Cmdr. W. M. Johnson of the Naval Hospital, Newport, R. I., who himself had transferred by helicopter a day earlier from the Destroyer Turner after suffering severe seasickness.

Assisting Johnson were Capt. Karl R. Whitney of Pensacola, the Antietam's senior medical officer, and two Project Mercury physicians assigned to examine Astronaut John H. Glenn if his spacecraft lands in the Antietam's area, the Mercury team members are Army Lt. Col. Richard A. Rink, San Antonio, Texas, who administered the anesthetic, and Air Force Lt. Col. Evan W. Schear, Wright-Patterson Air Force Base, Ohio. Navy Lt. Peter Zack, assistant medical officer of the Antietam, also took part.

Antietam Duty Corpsmen in attendance were Hospitalmen Donald Manley, Columbia, Pa., Gene Long, Gatesville, Texas, Jerry Johnson, Detroit, David O'Donnell, Northampton, Mass., and John K. Graham, Beloit, Wis.

Hester, stationed on the Antietam until about eight months ago, has been detached temporarily from Pensacola's Saufley Field for duty with Project Mercury. He is a teletype repairman.



ACTING MANAGER Tom Markley, Hank Yschek, and Ray Clemence, from left, put up sign announcing establishment of NASA Apollo Office at North American Aviation's Space and Information Systems Division in Downey, Calif. Office will serve as liaison between division, which is prime contractor for Apollo spacecraft, and NASA's Manned Spacecraft Center.

Apollo Contract Given To GE

The General Electric Company has been selected by the National Aeronautics and Space Administration for a major supporting role in the manned lunar Apollo project.

The contractor will be charged with:

1. Providing integration analysis of the total space vehicle, including booster-spacecraft interface.

2. Assuring overall reliability of the entire space vehicle.

3. Developing and operating a checkout system for the total vehicle.

The work, to be done by elements of GE's Defense Systems Department, Syracuse, N. Y., will be performed in two phases. The first, labeled the study phase, will require about six months. During that period, about 75 persons will do detail planning for the effort. Cost of the study phase will be approximately $1 million.

The second or implementation phase will carry through the life of Project Apollo, goal of which is to land an American on the moon before 1970. A cost estimate on this phase of the program awaits the completion of the initial study.

GE people will work with the NASA centers involved and with their several major Apollo contractors. The Office of Manned Space Flight Programs, NASA Headquarters, will monitor the GE effort.

NASA selected GE for the job after considering a number of major corporations with space systems integration and checkout experience.

NAME CHANGE

Northrop Corporation will change the name of its Radioplane Division to Northrop Corporation —Ventura Division effective April 2, 1962.

MSC's Apollo Liaison Office Is Opened at North American

DOWNEY, CALIF.—A National Aeronautics and Space Administration Apollo Office has been established at North American Aviation's Space and Information Systems Division here under the direction of acting manager Tom Markley.

The office primarily will serve as liaison between the division, which is prime contractor for the Apollo spacecraft program, and the NASA Apollo Project Office at the Manned Spacecraft Center, Houston, Texas.

In addition to Markley, who is also special assistant to the NASA Apollo project manager, the initial staff includes Ray Clemence, from the Apollo Office of Program Control, who will head the program control and Program Evaluation and Review Technique (PERT) areas, and Procurement Representative Hank Yschek. All formerly were associated with NASA's Project Mercury team.

Welcome Aboard

During the period January 30 through February 12 there were 81 persons added to the Manned Spacecraft Center staff.

Supply Office: Walter Williams, Juanita H. Bower.

Gemini Project Office: Kenneth F. Hecht, Billy R. Warden, Wyendell B. Evans, Clifford M. Jackson, Alfred A. Bishop, Percy S. Miglicco, Edward P. Gammon, Jr., Robert L. Frost, Daniel G. Hanning, John R. Hoffman.

Apollo Project Office: Paul E. Ebersole, Jr., Milton G. Kingsley, Gilbert C. Symons, Gareth H. Jordan, Richard G. Irvin.

Astronauts & Training Office: James L. Lewis, Richard E. Day.

Transportation Office: Leon R. Davis, Edward J. Kawiaka, Aubrey C. Bailey, Sallie Ann Marks.

Budget & Finance Office: Betty E. Tuttle, Mary H. Roane, Robert M. Weiner, Rosalie A. Mackey.

Digital Computer Group: Shirley T. Daulton.

Personnel Office: Ralph R. Appel.

Stenographic Services: Lydia M. May, Margaret Sullivan, Gwendolyn G. Pyeatt, Jeraldine A. Warmasch, Herma R. Langford, Dora C. Busby, Sara R. Royer, Kristine L. Smith, Dorothy E. Richardson, Evelyn A. Teeters.

Management Services: William A. Bower.

Technical Information: Virginia H. Epperly..

Procurement & Supply: Silvie

(*Continued to page 6*)

Tracking Station Negotiations Start

The National Aeronautics and Space Administration will negotiate with two companies to select a contractor to operate five manned spaceflight tracking stations.

Negotiations will begin soon with Bendix Radio Division of Bendix Corporation, Towson, Maryland, and RCA Service Company, Cherry Hill, N. J., on a two-year contract worth about $10 million. It is for operation and maintenance of the Project Mercury stations at Bermuda, Grand Canary Island; Kano, Nigeria; Zanzibar; and Guaymas, Mexico. Also included in the test and demonstration station at Wallops Station, Virginia. The Project Mercury network will also be used in Project Gemini—the follow-on program to Mercury. Gemini is a two-man spacecraft which will conduct rendevous missions.

Bendix has operated these stations for about a year and its contract will be extended until December 31, 1962. The new contract to be negotiated will cover 1963-64 operations.